

REMARKS/ARGUMENTS

The July 23, 2010 Decision of the Board of Patent Appeals and Interferences ("Board") has been reviewed and considered. According to the Decision, the Primary Examiner has been affirmed in the rejection of claims. *See* Decision at 2. More specifically, the Board concludes:

- by a preponderance of evidence and weight of argument, claims 1, 5-7 and 43 would have been obvious as a matter of law under 35 USC 103(a) in view of the combined teachings of:
(i) the abstract of PL 149319 to Bziawa ("Bziawa") and abstract of CN 1060052 to Feng ("Feng"); *see* Decision at 42, Sec. XII; and/or (ii) U.S. Patent No. 3,674,471 to Joseph ("Joseph") alone; *see* Decision at 53 (regarding claims 1, 5, and 43).

- by a preponderance of evidence and weight of argument, claims 22, 25 and 44 would have been obvious as a matter of law under 35 USC 103(a) in view of the combined teachings of:
(i) the abstract of Bziawa and abstract of Feng; *see* Decision at 42 (ii) the abstract of SU 1706816 to Smirnov ("Smirnov") and the abstract of Feng; (iii) the combined teachings of U.S. Patent No. 3,428,442 to Yurasko ("Yurasko") and the abstract of Feng; *see* Decision at 49 (iv) the abstract of Feng alone; *see* Decision at 53; and/or (v) Joseph alone; *see* Decision at 53 (regarding claim 22).

- by a preponderance of evidence and weight of argument, claims 35-38 would have been obvious as a matter of law under 35 USC 103(a) in view of the combined teachings of: (i) the abstract of Bziawa and abstract of Feng; (ii) the combined teachings of the abstract of EP 0465861 to Lugscheide ("Lugscheide") and abstract of Feng; (iii) the combined teachings of Yurasko and the abstract of Feng; and/or (iv) the abstract of Feng alone. *See* Decision at 42, Sec. XII; at 46; at 49; at 53.

• by a preponderance of evidence and weight of argument, claims 39-42 would have been obvious as a matter of law under 35 USC 103(a) in view of the combined teachings of: (i) the abstract of Bziawa and abstract of Feng; (ii) the combined teachings of Yurasko and the abstract of Feng; (iii) the abstract of Bziawa, Yurasko, and Joseph; and/or (iv) the abstract of Lugscheide and abstract of Feng. *See* Decision at 42; 44; 46 & 49.

Each of independent claims 1, 22, 35 and 39 and dependent claims 37 and 41 has been amended. New claims 45 - 59 are presented for the Examiner's consideration. Accordingly, claims 1, 5-7, 22, 25, and 35-59 are pending. In view of the claim amendments above and the remarks below, applicant submits that the claims are not rendered obvious by the art of record. It should be noted that claims have been amended to advance prosecution. Applicant does not disclaim the scope of claims presented on appeal and reserves the right to pursue those claims in this or other continuation applications. Thus, applicant further reserves the right to present evidence to overcome the Examiner's and Board's conclusion of obviousness with regard to the claims on appeal.

CLAIMS 1, 5-7 and 43

Independent claim 1 has been amended to recite a solid brazing component comprising, an alloy consisting essentially of, among other things, in weight percent "(f) an amount of antimony being no more than about 4%; (g) an amount of manganese being no more than about 3%; and the balance copper, the component having a liquidus temperature above 840°F and being selected from the group consisting of wire, strip, foil and preforms." Support for the amendment is provided by the application as originally filed, for example, at page 8, lines 17-20; and at page 9, lines 8-9. Accordingly no new matter is introduced.

Applicant submits that the abstracts of Bziawa and Feng do not render the claimed solid brazing component obvious. In both the Decision and the Examiner's final rejection, it was acknowledged that Bziawa did not show, describe, teach or suggest a solid brazing component, "selected from the group consisting of wire, strip, foil and performs." *See* Final Office Action of Apr. 8, 2008 at 2. Instead, the abstract of Bziawa, describes a paste suitable for brazing of electric motor terminals. *See* Bziawa, Abstract. To reach the claimed invention, the Examiner proposed to combine or modify the abstract of Bziawa with the abstract of Feng which describes Ag-solder substitutes which are formed to soldering rods, ingots, strips or powders. *See* Final Office Action at 3. As a rationale in support of the rejection and the combination of the Bziawa and Feng abstracts, the Examiner maintains that "it is contemplated with ambit of ordinary skill in the artisan to form brazing component into form suitable for the brazing such as a rod without paste and carrier." *See* Examiner's Answer at 5-6. The Board, in affirming the Examiner, determined that one of ordinary skill in the art would have reasonably expected a Cu brazing alloy described in the abstract of Bziawa to have the similar properties to a Cu brazing alloy described in the abstract of Feng, "including the formation of solid components for brazing and soldering." *See* Decision at 19 (noting that "Appellant has not adduced evidence or argument to the contrary").

Applicant submits that Bziawa alone or in combination with Feng does not render the claimed solid brazing component selected from the group of wire, strip, foil and other preforms of independent claim 1 obvious because the Examiner has not provided a rationale in support of modifying Bziawa without a paste, particularly in view of the complete teachings of Bziawa. As an initial matter, any obviousness determination requires "considering both the invention and the prior art references as a whole. *See* MPEP 2141.02 ("A prior art reference must be considered in

its entirety, i.e., as a whole, including portions that would lead away from the claimed invention.). Applicant submits that neither Bziawa nor Feng were considered "as a whole;" rather only their respective abstracts were relied upon the Examiner and the Board. Footnote 2 of the Decision seems to indicate as much.

The Examiner relies on a commercially prepared abstract for each of the foreign patent documents cited in the grounds of rejection. Each commercial abstract is in fact a separate and distinct document from the foreign patent document. . . . Accordingly, we have considered the commercial abstracts for the information each conveys to one of ordinary skill in the art. Indeed, the Examiner does not rely on, and *we have not considered, the translations of the foreign patent documents mailed with the Examiner's Answer.*

See Decision at 2, n. 2 (citation omitted) (emphasis added). Although the Board considers an abstract a "separate and distinct" document from its associated foreign patent document, applicant asserts that the abstract is not independent of its associated foreign patent document. Accordingly, because Bziawa and Feng have not been considered "as a whole," applicant submits that consideration of the issue of whether the combined teaching of Bziawa and Feng "as a whole" render claims 1, 5-7 and 43 *prima facie* obvious is not now precluded by the Board's decision.

Referring to English translation of Bziawa provided with the Examiner's Answer of February 3, 2009, it is expressly stated that the object of the invention is "a paste for soldering hard elements of copper, in particular, lead of electric motors." See English Translation of Bziawa at 2. Moreover, Bziawa explains that "[d]ue to its qualitative and quantitative composition, the soldering paste according to the invention is particularly well suited for soldering copper elements having small sections, e.g., copper wires having section below 1 mm²." See Bziawa at 3. The vehicle used in forming the paste of Bziawa includes methyl cellulose, glucose, and starch with the remainder water. See Bziawa at 3. According to Bziawa,

the vehicle used in the paste binds the binder powder of the paste very well and maintains it permanently on the small sections of soldered ends. *See* Bziawa at 3.

Applicant submits that modifying the paste of Bziawa so as to form rods or strips as taught by Feng renders Bziawa unsuitable for its intended purpose. To the extent that the Examiner is relying on Feng to teach rods and strips of known solder products, applicant submits that Feng does not provide a suggestion to modify Bziawa because it would render Bziawa unsuitable for its intended purpose. "If proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification." MPEP 2143.01 V (*In re* Gordon, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984)). Because there is no suggestion in either Bziawa or Feng to modify Bziawa as proposed by the Examiner, applicant submits that Bziawa alone or in combination with Feng does not render claims 1, 5-7 and 43 *prima facie* obvious.

In the absence of any other rationale in support of the rejections, applicant requests withdrawal of the rejection. As noted above, the Examiner asserts in support of the rejections that, "it is contemplated within ambit of ordinary skill artisan to form the brazing component into form suitable for brazing application such as a rod without paste and carrier." *See* Examiner' Answer at 5-6. However, a "statement that modifications of the prior art to meet the claimed invention would have been 'well within the ordinary skill of the art at the time the claimed invention was made' because the references relied upon teach that all aspects of the claimed invention were individually known in the art *is not sufficient to establish a prima facie case of obviousness without some objective reason to combine the teachings of the references.*" MPEP 2143.01 IV. (emphasis added)

Moreover, submitted with this amendment submission is an Information Disclosure Statement that cites the Office's latest examination guidelines, "Examination Guidelines Update: Developments in the Obviousness Inquiry After *KSR v. Teleflex*," 75 Fed. Reg. 53,643 (Sept. 1, 2010) ("Guidelines"). According to the Guidelines,

In view of the cases decided since *KSR*, one situation when it is important to identify a reason to combine known elements in a known manner to obtain predictable results is when the combination requires a greater expenditure of time, effort, or resources than the prior art teachings. Even though the components are known, the combining step is technically feasible, and the result is predictable, the claimed invention may nevertheless be nonobvious when the combining step involves such additional effort that no one of ordinary skill would have undertaken it without a recognized reason to do so. When a combination invention involves additional complexity as compared with the prior art, *the invention may be nonobvious unless an examiner can articulate a reason for including the added features or steps. This is so even when the claimed invention could have been implemented.*

Guidelines, 75 Fed. Reg. 53,643, 53,646 (emphasis added). Applicant submits that the Examiner has not articulated a reason for modifying the paste of Bziawa with the teachings of Fend to be a rod, ingot or strip. Without a rationale to modify Bziawa with the additional step of forming a wire, strip, foil or preform as claimed, claims 1, 5-7 and 43 are not rendered *prima facie* obvious. Withdrawal of rejection is respectfully requested.

The Examiner concluded and the Board affirmed that Joseph alone rendered claims 1, 5, 7, and 43, as presented on appeal, *prima facie* obvious. See Decision at 53. Throughout the prosecution of the instant application, the Examiner has maintained, "Claims 1, 5, . . . and 43 are rejected under 35 U.S.C. § 103 as being unpatentable over USP 3674471 Joseph." See Office Action of Oct. 25, 2005 at 6; see Final Office Action of May 18, 2006 at 5; see Office Action of June 28, 2007 at 6; see Final Office Action of April 8, 2008 at 6; and Examiner's Answer at 8. The Examiner has not articulated any rationale in support of the rejection. Applicant kindly

reminds the Examiner that a *prima facie* case of obviousness requires an articulation of a rationale as to why the claimed invention would have been obvious. *See* MPEP 2143.

Notwithstanding, applicant has amended claim 1 to advance prosecution. As noted above, claim 1 has been amended to recite that the claimed solid brazing component comprises an alloy consisting essentially of an amount of antimony that does not exceed about 4%; and an amount of manganese being no more than about 3%. Accordingly, amended claim 1 now requires an amount of antimony and manganese. Applicant submits that the Joseph alone does not describe, teach nor suggest an alloy having either antimony or manganese. The Board's decision supports this conclusion at least with respect to antimony. In affirming the Examiner, the Board concluded that

[T]he claimed weight percent ranges for P, Ni, and Cu and the [sic] for Sn, Ag and Si, respectively overlap and encompass the weight percent ranges for these elements in the alloys described by Joseph and the claimed alloys can contain Sb *while the Joseph alloys do not. See above p. 42.*

Decision at 52 (emphasis added). At page 42 of the Decision, the Board analyzed Joseph in combination with Bziawa. Because Joseph alone fails to show, describe, teach or suggest a solid brazing component having an alloy consisting essentially of, among other things, an amount of antimony and manganese as now claimed, Joseph alone fails to render amended claim 1 *prima facie* obvious. Claims 5-7 and 43 depend from amended claim 1 and therefore are patentable over Joseph for at least the same reason. Withdrawal of the rejections is requested.

CLAIMS 22, 25 and 44

Independent claim 22 has been amended to recite a solid brazing component comprising an alloy consisting essentially of, among other things, "(e) an amount of silicon, the amount of silicon ranging between a minimum and a maximum, the minimum being about 0.001% . . . (f)

an amount of antimony that does not exceed about 4% . . . the component having a liquidus temperature above 840°F and being selected from the group consisting of wire, strip, foil and preforms." The amendment is supported by the application as originally filed, for example, at 9, lines 3-4 and at 10, lines 2. Accordingly, no new matter is introduced.

The Board affirmed the Examiner's rejection of claims 22, 25 and 44 as being unpatentable as a matter of law under 35 USC 103(a) over Bziawa in view of Feng. *See* Decision at 42. As noted above, it was acknowledged that Bziawa does not show, describe, teach or suggest a solid brazing component, "selected from the group consisting of wire, strip, foil and performs." *See, e.g.*, Final Office Action of Apr. 8, 2008 at 2. Instead, the abstract of Bziawa, describes a paste suitable for brazing of electric motor terminals. *See* Bziawa, Abstract. To reach the claimed invention, the Examiner proposed to combine or modify the abstract of Bziawa with the abstract of Feng. *See* Examiner's Answer at 5-6. The Board determined that one of ordinary skill in the art would have reasonably expected a Cu brazing alloy described in the abstract of Bziawa to have the similar properties to a Cu brazing alloy described in the abstract of Feng, "including the formation of solid components for brazing and soldering." *See* Decision at 19 (noting that "Appellant has not adduced evidence or argument to the contrary").

Again, applicant submits that Bziawa alone or in combination with Feng does not render the claimed solid brazing component selected from the group of wire, strip, foil and other preforms of independent claim 22 obvious because the Examiner has not provided a rationale in support of modifying Bziawa without a paste, particular in view of the complete teachings of Bziawa. Neither Bziawa nor Feng were considered "as a whole"; rather only their respective abstracts were relied upon the Examiner and the Board. *See supra* at 14 (quoting Decision at 2, n. 2); *see also* MPEP 2141.02.

With Bziawa and Feng properly considered as a whole, *see supra* at 14 - 15 (discussing Bziawa), applicant submits that modifying the paste of Bziawa so as to form rods or strips as taught by Feng renders Bziawa unsuitable for its intended purpose. Thus, Feng does not provide a suggestion to modify Bziawa to reach the claimed invention because it would render Bziawa unsuitable for its intended purpose. MPEP 2143.01 V. Because there is no suggestion in either Bziawa or Feng to modify Bziawa as proposed by the Examiner, applicant asserts that Bziawa alone or in combination with Feng does not render claims 22, 25 or 44 *prima facie* obvious. Withdrawal of the rejections is respectfully requested.

The Board also affirmed the Examiner's final rejection of claims 22 and 25 as being unpatentable over the abstract of Smirnov in view of the abstract of Feng, and concluded that the claims, as presented on appeal, would have been obvious as a matter of law under 35 USC 103(a). *See* Decision at 49. The Examiner apparently only relied upon and the Board only considered the abstract of Smirnov and the abstract of Feng; the Board elected not to consider the English translations of the associated foreign patents. *See* Decision at 2, n. 2. Therefore consideration of the amended claims in view of the English translation of Smirnov is not precluded by the Board's Decision. Applicant submits that Smirnov, alone or in combination with Feng, when considered "as a whole" does not render amended claims 22 and 25 *prima facie* obvious. MPEP 2141.02.

In particular, Smirnov alone or in combination with Feng, fails to show, describe teach or suggest a solid brazing component having an alloy as now claimed in amended claim 22 consisting essentially of, among other things, an amount of silicon, ranging between a minimum and maximum, the minimum being about 0.001% and the maximum being about 3%. Applicant asserts that modifying Smirnov to have a Silicon content with a minimum amount as now

claimed would render Smirnov unsuitable for its intended purpose, and therefore there can be no suggestion to modify Smirnov to reach the claimed invention in support of a *prima facie* case of obviousness.

The abstract of Smirnov describes that in the subject alloy, the shrinkage porosity is decreased. *See* Smirnov Abstract. The English translation of the Smirnov Description describes that the Smirnov solder includes an amount of silicon that ranges from 1.0-4.5 % by weight. *See* English Translation of Smirnov at 6 (describing an indium content range). However, the introduction of silicon (with the indium) in an amount below the lower limit into the Smirnov composition of the alloy results in an increase in the hardening time and the formation of shrinkage porosity becomes possible. *See* Smirnov at 7. Accordingly, any modification of Smirnov to have silicon with a minimum as now claimed in independent claim 22 would render the Smirnov alloy unsuitable for its intended purpose. *See also* English Translation of Smirnov at 5 ("Reduction of the shrinkage porosity and strengthening of the solder joint are achieved by alloying the solder with silicon and indium within the indicated limits."). Because modifying Smirnov to reach the claimed solid brazing component alloy would render Smirnov unsuitable for its intended purpose, there is no suggestion to do so. MPEP 2143.01 V. Feng does not cure the deficiency, and therefore Smirnov, when considered as a whole, alone or in combination with Feng, fails to render independent claim 22 *prima facie* obvious. Claim 25 depends from claim 22 and is therefore patentable over Smirnov for at least the same reason. Withdrawal of the rejections is respectfully requested.

Amended independent claim 22 is patentable over Yurasko alone; Feng alone or in combination with one another. *Cf.* Decision at 49 (concluding claim 22 on appeal would be obvious in view of the combined teachings of Yurasko and the Feng abstract). Claim 22 has

been amended to recite that the alloy of the solid brazing component consists essentially of, among other things, "an amount of antimony that does not exceed about 4%." Accordingly, claim 22 now requires an amount of antimony." Neither Yurasko nor Feng describe having such an element. *See, e.g.*, Decision at 48. Because Yurasko and Feng individually or in combination with one another fail to show, describe, teach, suggest or otherwise render obvious each and every element of amended claim 22, the references fail to reach the claimed invention as a whole. Claims 25 and 44 depend from claim 22 and are therefore patentable over Yurasko and Feng for at least the same reasons. Withdrawal of the rejections is respectfully requested.

For similar reasons, amended independent claim 22 is patentable over Joseph alone. As noted above, Joseph does not describe an alloy having antimony. *See* Decision at 42. Because Joseph alone fails to show, teach, suggest or render obvious an alloy having an amount of antimony as now claimed in independent claim 22, Joseph fails to render the claim *prima facie* obvious. Withdrawal of the rejection is respectfully requested.

CLAIM 35 – 38

Independent claim 35 has been amended to recite a solid brazing component comprising an alloy consisting essentially of, among other things, "(c) an amount of silicon ranging between a minimum and a maximum . . . the maximum being about 3%; . . . (f) an amount of antimony that does not exceed about 4%; . . . the component having a liquidus temperature above 840°F and being selected from the group consisting of: wire, strip, foil and preforms " The amendment to the claims is supported by the application as-filed, for example, at 9, lines 3-4; at 10, lines 7-8. Accordingly no new matter is introduced.

The Board affirmed the Examiner's rejection of claims 35-38, as presented on appeal, as being unpatentable as a matter of law under 35 USC 103(a) over Bziawa in view of Feng. *See* Decision at 42. As noted above, it was acknowledged that Bziawa does not show, describe, teach or suggest a solid brazing component, "selected from the group consisting of wire, strip, foil and performs." *See* Final Office Action of Apr. 8, 2008 at 2. To reach the claimed invention, the Examiner proposed to combine or modify the abstract of Bziawa with the abstract of Feng. The Board concluded that one of ordinary skill in the art would have reasonably expected a Cu brazing alloy described in the abstract of Bziawa to have the similar properties to a Cu brazing alloy described in the abstract of Feng, "including the formation of solid components for brazing and soldering." *See* Decision at 19 (noting that "Appellant has not adduced evidence or argument to the contrary").

Applicant submits that Bziawa alone or in combination with Feng does not render the claimed solid brazing component selected from the group of wire, strip, foil and other preforms of independent claim 35 obvious because the Examiner has not provided a rationale in support of modifying Bziawa without a paste, particular in view of the complete teachings of Bziawa. Applicant submits that neither Bziawa nor Feng were considered "as a whole"; rather only their respective abstracts were relied upon the Examiner and the Board. *See supra* at 14 (quoting Decision at 2, n. 2); MPEP 2141.02.

With Bziawa and Feng properly considered as a whole, *see supra* at 14-15 (discussing Bziawa), Applicant submits that modifying the paste of Bziawa so as to form rods or strips as taught by Feng renders Bziawa unsuitable for its intended purpose; thus, there is no suggestion in either Bziawa or Feng to modify Bziawa as proposed by the Examiner. MPEP 2143.01 V.

Applicant asserts that Bziawa alone or in combination with Feng does not render claims 35-38 *prima facie* obvious. Withdrawal of the rejections is respectfully requested.

The Board affirmed the Examiner's rejection of claims 35-38 (presented on appeal) as being unpatentable as a matter of law under 35 USC 103(a) over the combined teachings of the abstracts of Lugscheide and Feng. *See* Decision at 46. The Examiner apparently only relied upon and the Board only considered the abstract of Lugscheide and the abstract of Feng; the Board elected not to consider the English translations of the associated foreign patents. *See* Decision at 2, n. 2. Accordingly, consideration of amended independent claim 35 in view of the English Translation of Lugscheide is not precluded by the Board's decision. Applicant submits that Lugscheide, alone or in combination with Feng, when considered "as a whole" does not render amended claims 35-38 *prima facie* obvious. MPEP 2141.02.

Amended independent claim 35 recites that the claimed alloy has an amount of silicon ranging to a maximum being about 3%. Amended dependent claim 37 recites that the claimed amount of silicon is about 1%. The abstract of Lugscheide describes a brazing alloy of 0.01-0.08% silicon. Applicant submits upon consideration of the English Translation of Lugscheide "as a whole," there is no suggestion to modify the alloy of Lugscheide to have an amount of silicon ranging to a maximum amount of about 3% nor being about 1% as respectively claimed in claims 35 and 37. Rather, Lugscheide describes that alloys with silicon content of 0.1% or greater "lead to the formation of so-called 'solder sacks or bags' due to a very low viscosity of the those soldering materials." *See* English Translation of Lugscheide at 4. According to Lugscheide, "the object of the proposed invention was to develop a solder alloy for the soldering of copper and copper alloys . . . the set objective is achieved in such a way, that the alloys contain . . . 0.01 to 0.08% silicon." *See* English Translation of Lugscheide at 4 (emphasis

added). Upon considering Lugscheide as a whole, applicants submit that modifying the alloy of Lugscheide with the silicon content as claimed in either claims 35 or 37 would render Lugscheide unsuitable for its intended purpose. Accordingly, there is no suggestion to modify Lugscheide to reach the claimed invention. Feng does not cure the deficiency. MPEP 2143.01 V ("If proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification."). Lugscheide alone or in combination with Feng fails to render amended claims 35 and 37 *prima facie* obvious. In the absence of any other supporting rationale, the rejections cannot stand. Claims 36 and 38 respectively depend from claims 35 and 37, and are therefore patentable over Lugscheide and Feng for at least the same reasons. Withdrawal of the rejection is respectfully requested.

The Board concluded that claims 35-38, as presented on appeal are unpatentable as a matter of law under 35 USC 103(a) over the combined teaching of Yurasko and the abstract of Feng; or alternatively, in view of the Feng abstract alone. *See* Decision at 49 & 51. Independent claim 35 as amended requires an amount of antimony. As noted above, neither Yurasko nor Feng show, describe, teach, suggest or otherwise render obvious a brazing alloy having an amount of antimony. Because Yurasko and/or Feng fail to have each and every feature as claimed in independent claim 35, the references fail to render independent claim 35 *prima facie* obvious. Claims 36-38 depend from claim 35 and are patentable over the references. Withdrawal of the rejections is respectfully requested.

CLAIMS 39-42

Independent claim 39 was amended to recite a component for brazing without a flux, the component consists of, among other things, "(b) a sum of antimony and tin not exceeding about 10%, the amount of tin being about 0.1-8%; (c) an amount of silicon, the amount of silicon ranging between a minimum and a maximum, the minimum being about 0.001%, the maximum being about 3% . . . , the component having a liquidus temperature above 840°F selected from the group consisting of: wire, strip, foil and preforms, wherein the brazing component." The amendment to the claims is supported by the application as-filed, for example, at 9, lines 3-4; at 10, lines 7-8; and 13, line 5-7. Accordingly no new matter is introduced.

The Board affirmed the Examiner's rejection of claims 39-42 as being unpatentable as a matter of law under 35 USC 103(a) over Bziawa in view of Feng. *See* Decision at 42. As discussed above, the Examiner proposed to combine or modify the abstract of Bziawa with the abstract of Feng; maintaining that "it is contemplated with ambit of ordinary skill in the artisan to form brazing component into form suitable for the brazing such as a rod without paste and carrier." *See* Examiner's Answer at 3; 5-6. The Board concluded that one of ordinary skill in the art would have reasonably expected the Cu brazing alloy of the Bziawa abstract to have the similar properties to the alloy of the Feng abstract, "including the formation of solid components for brazing and soldering." *See* Decision at 19 (noting that "Appellant has not adduced evidence or argument to the contrary").

Applicant submits that Bziawa alone or in combination with Feng does not render the claimed solid brazing component selected from the group of wire, strip, foil and other preforms of independent claim 39 obvious because the Examiner has not provided a rationale in support of

modifying Bziawa without a paste, particular in view of the complete teachings of Bziawa. Again, applicant submits that neither Bziawa nor Feng were considered "as a whole"; rather only their respective abstracts were relied upon the Examiner and the Board. *See supra* at 14 (quoting Decision at 2, n. 2). However, with Bziawa and Feng properly considered as a whole, *see supra* at 14-15 (discussing Bziawa), applicant submits that modifying the paste of Bziawa so as to form rods or strips as taught by Feng renders Bziawa unsuitable for its intended purpose. Thus, there is no suggestion in either Bziawa or Feng to modify Bziawa as proposed by the Examiner. MPEP 2143.01 V Applicant asserts that Bziawa alone or in combination with Feng does not render claims 39-42 *prima facie* obvious.

Claims 39-42 were determined by the Board to be unpatentable over the combined teachings of the abstract of Bziawa, Yurasko and Joseph. Neither the rod form of Joseph nor the powder of Yurasko cures the deficiency in Bziawa so as to reach the claimed invention. Accordingly, Bziawa alone or in combination with either of Joseph or Yurasko fails to render claims 39-42 *prima facie* obvious. Withdrawal of the rejections is respectfully requested.

The Board concluded that claims 39-42, as presented on appeal are unpatentable as a matter of law under 35 USC 103(a) over the combined teaching of Yurasko and the abstract of Feng; or alternatively, in view of the Feng abstract alone. *See* Decision at 49 & 51. Independent claim 39 as amended requires an amount of antimony. As noted above, neither Yurasko nor Feng show, describe, teach, suggest or otherwise render obvious a brazing alloy having an amount of antimony. Because Yurasko and/or Feng fail to have each and every feature as claimed in independent claim 39, the references fail to render independent claim 39 *prima facie* obvious. Claims 40-42 depend from claim 39 and are patentable over the references. Withdrawal of the rejections is respectfully requested.

Finally, claims 39 – 42 on appeal were found to be unpatentable as a matter of law under 35 USC 103(a) in view of the combined teaching of Lugscheide and Feng. *See* Decision at 46. Amended independent claim 39 recites that the claimed alloy has an amount of silicon, the amount having a maximum being about 3%. Accordingly, claim 39 requires an amount of silicon. Amended dependent claim 41 recites that the claimed amount of silicon is at least about 0.1%. The abstract of Lugscheide describes a brazing alloy of 0.01-0.08% silicon. Applicant submits upon consideration of the English Translation of Lugscheide "as a whole," there is no suggestion to modify the alloy of Lugscheide to have an amount of silicon being either a maximum amount of about 3% nor at least about 1% as respectively claimed in claims 39 and 41. In particular, Lugscheide describes that alloys with silicon content of 0.1% or greater "lead to the formation of so-called 'solder sacks or bags' due to a very low viscosity of the those soldering materials." *See* English Translation of Lugscheide at 4. According to Lugscheide, "the object of the proposed invention was to develop a solder alloy for the soldering of copper and copper alloys . . . the set objective is achieved in such a way, that the alloys contain . . . 0.01 to 0.08% silicon." *See* English Translation of Lugscheide at 4. Upon considering Lugscheide as a whole, applicants submit that modifying the alloy of Lugscheide with the silicon content as claimed in either claims 39 or 41 would render Lugscheide unsuitable for its intended purpose. Accordingly, there is no suggestion to modify Lugscheide to reach the claimed invention. Feng does not cure the deficiency. Thus, Lugscheide alone or in combination with Feng fails to render amended claims 39 and 41 *prima facie* obvious. MPEP 2143.01 V. In the absence of any other supporting rationale, the rejections cannot stand. Claims 40 and 42 respectively depend from claims 39 and 41, and are therefore patentable over Lugscheide and Feng for at least the same reasons. Withdrawal of the rejection is respectfully requested.

New Claims 45-59

New claims 45-59 are presented for the Examiner's consideration. The claims are supported by the application as originally filed, for example, at 4, lines 12-25; at 8, line 12 to page 11, line 15; to page 18, line 4, the table provided therein and originally filed claim 12 . Accordingly, no new matter is introduced.

CONCLUSION

In view of the above amendments and remarks, applicants respectfully request the allowance of claims 1, 5-7, 22, 25, and 35-59. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The Commissioner is hereby authorized by this paper to charge any fees during the entire pendency of this application including fees due under 37 C.F.R. §§ 1.16 and 1.17 which may be required, including any required extension of time fees, or credit any overpayment to Deposit Account 50-2283. **This paragraph is intended to be a CONSTRUCTIVE PETITION FOR EXTENSION OF TIME in accordance with 37 C.F.R. § 1.136(a)(3).**

Respectfully submitted,



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